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(54) Title: OLIGOSACCHARIDE BIOMARKERS FOR MUCOPOLYSACCHARIDOSES AND OTHER RELATED **DISORDERS**

(57) Abstract: The present invention is related to methods for diagnosing mucopolysaccharidoses ("MPS") and related diseases. This invention pertains to methods for identifying and quantitating biochemical markers ("biomarkers") that are present in biological fluids or tissues of a patient having a MPS or related disorder. One aspect of the method comprises determining a target quantity of a target MPS biomarker oligosaccharide from a target biological sample taken from the target animal, and then comparing the target quantity to a reference quantity of a reference MPS biomarker oligosaccharide for the diagnosis, characterization, monitoring, and clinical management of MPS and related disease. This invention also describes a kit comprising a oligosaccharide derivatization solution; an acid solution; an internal standard; a solid phase extraction column; a solid phase extraction column wash solution; an oligosaccharide elution solution; and a set of instructions for using the kit to diagnose a MPS or related disease.